

Sexually Transmitted Diseases

Summary of **2015** CDC Treatment Guidelines



**Centers for Disease
Control and Prevention**
National Center for HIV/AIDS,
Viral Hepatitis, STD, and
TB Prevention

These summary guidelines reflect the June 2015 update to the *2010 CDC Guidelines for Treatment of Sexually Transmitted Diseases*.

This summary is intended as a source of clinical guidance. When more than one therapeutic regimen is recommended the sequence is in alphabetical order unless the choices for therapy are prioritized based on efficacy, cost, or convenience. The recommended regimens should be used primarily; alternative regimens can be considered in instances of substantial drug allergy or other contraindications. An important component of STD treatment is partner management. Providers can arrange for the evaluation and treatment of sex partners either directly or with assistance from state and local health departments.

Complete guidelines can be viewed online at www.cdc.gov/std/treatment.

This booklet has been reviewed by the CDC 6/2015.

★ Indicates update from the *2010 CDC Guidelines for the Treatment of Sexually Transmitted Diseases*.

Bacterial Vaginosis

Cervicitis

Chlamydial Infections

Epididymitis

Genital Herpes Simplex

Genital Warts (Human Papillomavirus)

Gonococcal Infections

Lymphogranuloma venereum

Non-Gonococcal Urethritis (NGU)

Pediculosis Pubis

Pelvic Inflammatory Disease

Scabies

Syphilis

Trichomoniasis

Bacterial Vaginosis

Recommended Rx

metronidazole oral¹ OR

metronidazole gel 0.75%¹ OR

clindamycin cream 2%^{1,2}

Dose/Route

500 mg orally 2x/day for 7 days

One 5 g applicator intravaginally 1x/day for 5 days

One 5 g applicator intravaginally at bedtime for 7 days

Alternatives

tinidazole 2 g orally 1x/day for 2 days OR

tinidazole 1 g orally 1x/day for 5 days OR

clindamycin 300 mg orally 2x/day for 7 days OR

clindamycin ovules 100 mg intravaginally at bedtime for 3 days

★ Treatment is recommended for all symptomatic pregnant women.

Cervicitis

Recommended Rx

azithromycin OR
doxycycline³

Dose/Route

1 g orally in a single dose
100 mg orally 2x/day for 7 days

Alternatives

Consider concurrent treatment for gonococcal infection if at risk of gonorrhea or lives in a community where the prevalence of gonorrhea is high. Presumptive treatment with antimicrobials for *C. trachomatis* and *N. gonorrhoeae* should be provided for women at increased risk (e.g., those aged <25 years and those with a new sex partner, a sex partner with concurrent partners, or a sex partner who has a sexually transmitted infection), especially if follow-up cannot be ensured or if NAAT testing is not possible.

Chlamydial Infections

	Recommended Rx		Dose/Route	Alternatives
Adults and adolescents	azithromycin doxycycline ⁴	OR	1 g orally in a single dose 100 mg orally 2x/day for 7 days	erythromycin base ⁵ 500 mg orally 4x/day for 7 days OR erythromycin ethylsuccinate ⁶ 800 mg orally 4x/day for 7 days OR levofloxacin ⁷ 500 mg 1x/day orally for 7 days OR ofloxacin ⁹ 300 mg orally 2x/day for 7 days
Pregnancy ³	azithromycin ⁸		1 g orally in a single dose	★ amoxicillin 500 mg orally 3x/day for 7 days OR erythromycin base ^{5,9} 500 mg orally 4x/day for 7 days OR erythromycin base 250 mg orally 4x/day for 14 days OR erythromycin ethylsuccinate 800 mg orally 4x/day for 7 days OR erythromycin ethylsuccinate 400 mg orally 4x/day for 14 days
Infants and Children (<45 kg): urogenital, rectal	erythromycin base ¹⁰ ethylsuccinate	OR	50 mg/kg/day orally (4 divided doses) daily for 14 days	★ Data are limited on the effectiveness and optimal dose of azithromycin for chlamydial infection in infants and children < 45 kg
Neonates: ophthalmia neonatorum, pneumonia	erythromycin base ¹⁰ ethylsuccinate	OR	50 mg/kg/day orally (4 divided doses) daily for 14 days	★ azithromycin 20 mg/kg/day orally, 1 dose daily for 3 days

**Chlamydial
Infections**

Epididymitis^{11,12}

	Recommended Rx	Dose/Route	Alternatives
For acute epididymitis most likely caused by sexually transmitted CT and GC	ceftriaxone doxycycline	PLUS	250 mg IM in a single dose 100 mg orally 2x/day for 10 days
★ For acute epididymitis most likely caused by sexually-transmitted chlamydia and gonorrhea and enteric organisms (men who practice insertive anal sex)	ceftriaxone levofloxacin ofloxacin	PLUS OR	250 mg IM in a single dose 500 mg orally 1x/day for 10 days 300 mg orally 2x/day for 10 days
For acute epididymitis most likely caused by enteric organisms	levofloxacin ofloxacin	OR	500 mg orally 1x/day for 10 days 300 mg orally 2x/day for 10 days

Genital Herpes Simplex

	Recommended Rx	Dose/Route	Alternatives
First clinical episode of genital herpes	acyclovir OR acyclovir OR valacyclovir ¹³ OR famciclovir ¹³	400 mg orally 3x/day for 7-10 days ¹⁴ 200 mg orally 5x/day for 7-10 days ¹⁴ 1 g orally 2x/day for 7-10 days ¹⁴ 250 mg orally 3x/day for 7-10 days ¹⁴	
Episodic therapy for recurrent genital herpes	acyclovir OR acyclovir OR acyclovir OR valacyclovir ¹³ OR valacyclovir ¹³ OR famciclovir ¹³ OR famciclovir ¹³ OR famciclovir ¹³	400 mg orally 3x/day for 5 days 800 mg orally 2x/day for 5 days 800 mg orally 3x/day for 2 days 500 mg orally 2x/day for 3 days 1 g orally 1x/day for 5 days 125 mg orally 2x/day for 5 days 1000 mg orally 2x/day for 1 day ¹⁴ 500 mg orally once, followed by 250 mg 2x/day for 2 days	
Suppressive therapy ¹⁵ for recurrent genital herpes	acyclovir OR valacyclovir ¹³ OR valacyclovir ¹³ OR famciclovir ¹³	400 mg orally 2x/day 500 mg orally once a day 1 g orally once a day 250 mg orally 2x/day	
Recommended regimens for episodic infection in persons with HIV infection	acyclovir OR valacyclovir ¹³ OR famciclovir ¹³	400 mg orally 3x/day for 5-10 days 1 g orally 2x/day for 5-10 days 500 mg orally 2x/day for 5-10 days	
Recommended regimens for daily suppressive therapy in persons with HIV infection	acyclovir OR valacyclovir ¹³ OR famciclovir ¹³	400-800 mg orally 2-3x/day 500 mg orally 2x/day 500 mg orally 2x/day	

Genital Herpes Simplex

Genital Warts
(Human
Papillomavirus)

Genital Warts (Human Papillomavirus)¹⁶

	Recommended Rx	Dose/Route	Alternatives
External genital and perianal warts	Patient Applied ★ imiquimod 3.75% or 5% ¹³ cream OR podofilox 0.5% ¹³ solution or gel OR sinecatechins 15% ointment ^{2,13}	See complete CDC guidelines. Apply small amount, dry, apply weekly if necessary	★ podophyllin resin 10%–25% in compound tincture of benzoin may be considered for provider-administered treatment if strict adherence to the recommendations for application. OR intralesional interferon OR photodynamic therapy OR topical cidofovir
	Provider Administered Cryotherapy OR trichloroacetic acid or bichloroacetic acid 80%-90% OR surgical removal		

Gonococcal Infections¹⁷

	Recommended Rx		Dose/Route	Alternatives
Adults, adolescents: uncomplicated gonococcal infections of the cervix, urethra, and rectum	ceftriaxone	PLUS	250 mg IM in a single dose	
	azithromycin ¹⁰		1 g orally in a single dose	★ If ceftriaxone is not available: cefixime 400 mg orally in a single dose PLUS azithromycin ⁸ 1 g orally in a single dose
Pharyngeal	ceftriaxone	PLUS	250 mg IM in a single dose	
	azithromycin ¹⁰		1 g orally in a single dose	★ If cephalosporin allergy: gemifloxacin 320 mg orally in a single dose PLUS azithromycin 2 g orally in a single dose OR
Pregnancy ³	See complete CDC guidelines.			gentamicin 240 mg IM single dose PLUS azithromycin 2 g orally in a single dose
Adults and adolescents: conjunctivitis	ceftriaxone	PLUS	1 g IM in a single dose	
	azithromycin ¹⁰		1 g orally in a single dose	
Children (≤ 45 kg): urogenital, rectal, pharyngeal	ceftriaxone ¹⁸		25-50 mg/kg IV or IM, not to exceed 125 mg IM in a single dose	

*Lymphogranuloma
venereum*

Lymphogranuloma venereum

Recommended Rx	Dose/Route	Alternatives
doxycycline ⁴	100 mg orally 2x/day for 21 days	erythromycin base 500 mg orally 4x/day for 21 days

Nongonococcal Urethritis (NGU)

	Recommended Rx	Dose/Route	Alternatives
★ Persistent and recurrent NGU ^{3,19,20}	azithromycin ⁸ OR doxycycline ⁴	1 g orally in a single dose 100 mg orally 2x/day for 7 days	erythromycin base ⁵ 500 mg orally 4x/day for 7 days OR erythromycin ethylsuccinate ⁶ 800 mg orally 4x/day for 7 days OR levofloxacin 500 mg 1x/day for 7 days OR ofloxacin 300 mg 2x/day for 7 days
	Men initially treated with doxycycline: azithromycin	1 g orally in a single dose	
	Men who fail a regimen of azithromycin: moxifloxacin	400 mg orally 1x/day for 7 days	
	Heterosexual men who live in areas where <i>T. vaginalis</i> is highly prevalent: metronidazole ²¹ OR tinidazole	2 g orally in a single dose 2 g orally in a single dose	

Non-Gonococcal Urethritis (NGU)

*Pediculosis
Pubis*

Pediculosis Pubis

Recommended Rx

permethrin 1% cream rinse OR

pyrethrins with piperonyl
butoxide

Dose/Route

Apply to affected area, wash off after 10 minutes

Apply to affected area, wash off after 10 minutes

Alternatives

malathion 0.5% lotion, applied
8-12 hrs then washed off
ivermectin 250 µg/kg orally,
repeated in 2 weeks

OR

Pelvic Inflammatory Disease¹¹

Recommended Rx

Parenteral Regimens

Cefotetan	PLUS	2 g IV every 12 hours
Doxycycline	OR	100 mg orally or IV every 12 hours
Cefoxitin	PLUS	2 g IV every 6 hours
Doxycycline		100 mg orally or IV every 12 hours

Recommended Intramuscular/Oral Regimens

Ceftriaxone	PLUS	250 mg IM in a single dose
Doxycycline	WITH or WITHOUT	100 mg orally twice a day for 14 days
Metronidazole	OR	500 mg orally twice a day for 14 days
Cefoxitin	PLUS	2 g IM in a single dose
Probenecid	PLUS	1 g orally administered concurrently in a single dose
Doxycycline	WITH or WITHOUT	100 mg orally twice a day for 14 days
Metronidazole		500 mg orally twice a day for 14 days

The complete list of recommended regimens can be found in CDC's 2015 STD Treatment Guidelines.

Dose/Route

Alternatives

Parenteral Regimen	
Ampicillin/Sulbactam 3 g IV every 6 hours	PLUS
Doxycycline 100 mg orally or IV every 12 hours	

Scabies

Recommended Rx	Dose/Route	Alternatives
permethrin 5% cream OR ivermectin	Apply to all areas of body from neck down, wash off after 8-14 hours 200 µg/kg orally, repeated in 2 weeks	lindane 1% ^{22,23} 1 oz. of lotion or 30 g of cream, applied thinly to all areas of the body from the neck down, wash off after 8 hours

Syphilis

	Recommended Rx	Dose/Route	Alternatives
Primary, secondary, or early latent <1 year	benzathine penicillin G	2.4 million units IM in a single dose	doxycycline ^{7,24} 100 mg 2x/day for 14 days OR tetracycline ^{7,24} 500 mg orally 4x/day for 14 days
Latent >1 year, latent of unknown duration	benzathine penicillin G	2.4 million units IM in 3 doses each at 1 week intervals (7.2 million units total)	doxycycline ^{7,24} 100 mg 2x/day for 28 days OR tetracycline ^{7,24} 500 mg orally 4x/day for 28 days
Pregnancy ³ Neurosyphilis	See complete CDC guidelines. aqueous crystalline penicillin G	18–24 million units per day, administered as 3–4 million units IV every 4 hours or continuous infusion, for 10–14 days	procaine penicillin G 2.4 MU IM 1x daily PLUS probenecid 500 mg orally 4x/day, both for 10-14 days.
★ Congenital syphilis	See complete CDC guidelines.		
Children: Primary, secondary, or early latent <1 year	benzathine penicillin G	50,000 units/kg IM in a single dose (maximum 2.4 million units)	
Children: Latent >1 year, latent of unknown duration	benzathine penicillin G	50,000 units/kg IM for 3 doses at 1 week intervals (maximum total 7.2 million units)	
	See CDC STD Treatment guidelines for discussion of alternative therapy in patients with penicillin allergy.		

Trichomoniasis

	Recommended Rx	Dose/Route	Alternatives
Persistent or recurrent trichomoniasis	metronidazole ²¹ OR tinidazole ²⁵	2 g orally in a single dose 2 g orally in a single dose	metronidazole ²¹ 500 mg 2x/day for 7 days
	metronidazole	500mg orally 2x/day for 7 days	
	If this regimen fails: metronidazole OR tinidazole	2g orally for 7 days 2g orally for 7 days	
	If this regimen fails, susceptibility testing is recommended.		

Notes

1. The recommended regimens are equally efficacious.
2. These creams are oil-based and may weaken latex condoms and diaphragms. Refer to product labeling for further information.
3. Please refer to the complete 2015 CDC Guidelines for recommended regimens.
4. Should not be administered during pregnancy, lactation, or to children <8 years of age.
5. If patient cannot tolerate high-dose erythromycin base schedules, change to 250 mg 4x/day for 14 days.
6. If patient cannot tolerate high-dose erythromycin ethylsuccinate schedules, change to 400 mg orally 4 times a day for 14 days.
7. Contraindicated for pregnant or lactating women.
8. Clinical experience and published studies suggest that azithromycin is safe and effective.
9. Erythromycin estolate is contraindicated during pregnancy.
10. Effectiveness of erythromycin treatment is approximately 80%; a second course of therapy may be required.
11. Patients who do not respond to therapy (within 72 hours) should be re-evaluated.
12. For patients with suspected sexually transmitted epididymitis, close follow-up is essential.
13. No definitive information available on prenatal exposure.
14. Treatment may be extended if healing is incomplete after 10 days of therapy.

★ Indicates update from the 2010 CDC Guidelines for the Treatment of Sexually Transmitted Diseases.

Notes (continued)

15. Consider discontinuation of treatment after one year to assess frequency of recurrence.
16. Vaginal, cervical, urethral meatal, and anal warts may require referral to an appropriate specialist.
17. CDC recommends that treatment for uncomplicated gonococcal infections of the cervix, urethra, and/or rectum should include dual therapy, i.e. both a cephalosporin (e.g. ceftriaxone) plus azithromycin.
18. CDC recommends that cefixime in combination with azithromycin or doxycycline be used as an alternative when ceftriaxone is not available.
19. Only ceftriaxone is recommended for the treatment of pharyngeal infection. Providers should inquire about oral sexual exposure
20. Moxifloxacin 400mg orally 1x/day for 7 days is effective against *Mycoplasma genitalium*.
21. Pregnant patients can be treated with 2 g single dose.
22. Contraindicated for pregnant or lactating women, or children <2 years of age.
23. Do not use after a bath; should not be used by persons who have extensive dermatitis.
24. Pregnant patients allergic to penicillin should be treated with penicillin after desensitization.
25. Randomized controlled trials comparing single 2 g doses of metronidazole and tinidazole suggest that tinidazole is equivalent to, or superior to, metronidazole in achieving parasitologic cure and resolution of symptoms.

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